

CHAPTER 2: APPLICABILITY OF PROGRAM LEVELS

2.1 WHAT ARE PROGRAM LEVELS?

Once you have decided that you have one or more processes subject to this rule (see Chapter 1), you need to identify what actions you must take to comply. The rule defines three Program levels based on processes' relative potential for public impacts and the level of effort needed to prevent accidents. For each Program level, the rule defines requirements that reflect the level of risk and effort associated with the processes at that level. The Program levels are as follows:

Program 1: Processes with no public receptors within the distance to an endpoint from a worst-case release and with no accidents with specific offsite consequences within the past five years are eligible for Program 1, which imposes limited hazard assessment requirements and minimal prevention and emergency response requirements.

Program 2: Processes not eligible for Program 1 or subject to Program 3 are placed in Program 2, which imposes streamlined prevention program requirements, as well as additional hazard assessment, management, and emergency response requirements.

Program 3: Processes not eligible for Program 1 and either subject to OSHA's PSM standard under federal or state OSHA programs or classified in one of ten specified North American Industry Classification System (NAICS) codes are placed in Program 3, which imposes OSHA's PSM standard as the prevention program as well as additional hazard assessment, management, and emergency response requirements.

If you can qualify a process for Program 1, it is in your best interests to do so, even if the process is already subject to OSHA PSM. For Program 1 processes, the implementing agency will enforce only the minimal Program 1 requirements. If you assign a process to Program 2 or 3 when it might qualify for Program 1, the implementing agency will enforce all the requirements of the higher program levels. If, however, you are already in compliance with the prevention elements of Program 2 or Program 3, you may want to use the RMP to inform the community of your prevention efforts.

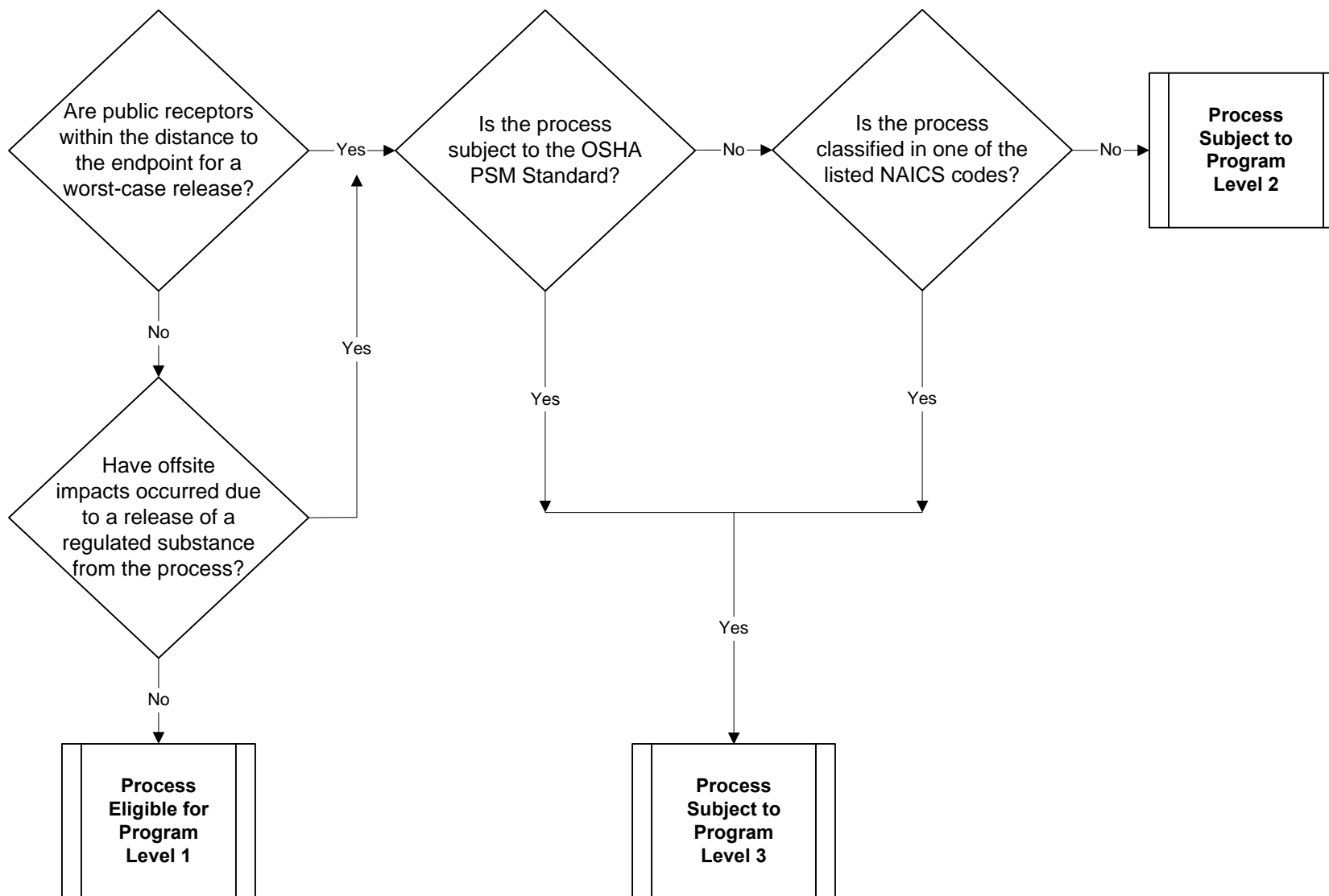
See Exhibit 2-1 for a diagram of the decision rules on Program level.

KEY POINTS TO REMEMBER

In determining program level(s) for your process(es), keep in mind the following:

- (1) **Each process is assigned to a program level**, which indicates the risk management measures necessary to comply with this regulation for that process, not the facility as a whole. The eligibility of one process for a

EXHIBIT 2-1 EVALUATE PROGRAM LEVELS FOR COVERED PROCESSES



program level does not influence the eligibility of other covered processes for other program levels.

- (2) **Any process that meets the criteria for Program 1 can be assigned to Program 1**, even if it is subject to OSHA PSM or is in one of the NAICS codes listed for Program 3.
- (3) **Program 2 is the default program level.** There are no "standard criteria" for Program 2. Any process that does not meet the criteria for either Programs 1 or 3 is subject to the requirements for Program 2.
- (4) **Only one Program level can apply to a process.** If a process consists of multiple production or operating units or storage vessels, the highest Program level that applies to any segment of the process applies to all parts.

Q & A PROCESS AND PROGRAM LEVEL

Q. My process includes a series of interconnected units, as well as several storage vessels that are co-located. Several sections of the process could qualify for Program 1. Can I divide my process into sections for the purpose of assigning Program levels?

A. No, you cannot subdivide a process for this purpose. The highest Program level that applies to any section of the process is the Program level for the whole process. If the entire process is not eligible for Program 1, then the entire process must be assigned to Program 2 or Program 3.

2.2 PROGRAM 1

WHAT ARE THE ELIGIBILITY REQUIREMENTS?

Your process is eligible for Program 1 if:

- (1) There are no public receptors within a distance to an endpoint from a worst-case release;
- (2) The process has had no release of a regulated substance in the past five years where exposure to the substance, its reaction products, overpressures generated by explosion involving the substance, or radiant heat from a fire involving the substance resulted in one or more offsite deaths, injuries, or response or restoration activities for exposure of an environmental receptor; and
- (3) You have coordinated your emergency response activities with the local responders. (This requirement applies to any covered process, regardless of program level.)

WHAT IS A PUBLIC RECEPTOR?

The rule (§ 68.3) defines **public** as "any person except an employee or contractor of the stationary source." Consequently, employees of other facilities that may share your site are considered members of the public even if they share the same physical location. Being "the public," however, is not the same as being a public receptor.

Public receptors include "offsite residences, institutions (e.g., schools and hospitals), industrial, commercial, and office buildings, parks, or recreational areas inhabited or occupied by the public at any time without restriction by the stationary source where members of the public could be exposed to toxic concentrations, radiant heat, or overpressure, as a result of an accidental release." **Offsite** means areas beyond your property boundary and "areas within the property boundary to which the public has routine and unrestricted access during or outside business hours."

The first step in identifying public receptors is determining what is "offsite." For most facilities, that determination will be straightforward. If you restrict access to all of your property all of the time, "offsite" is anything beyond your property boundaries. Ways of restricting access include fully fencing the property, placing security guards at a reception area or using ID badges to permit entry.

If you do not restrict access to a section of your property and the public has routine and unrestricted access to it during or after business hours, that section would be "offsite." For example, if your operations are fenced but the public has unrestricted access to your parking lot during or after business hours, the parking lot is "offsite." In the case of facilities such as hospitals, schools, and hotels that shelter members of the public as part of their function or business, the parts of the facility that are used to shelter the public would be "offsite."

Not all areas offsite are potential public receptors. The point of identifying public receptors is to locate those places where there are likely to be, at least some of the time, members of the public whose health could be harmed by short-term exposure to an accidental release at your site. The basic test for identifying a public receptor is thus whether an area is a place where it is reasonable to expect that members of the public will routinely gather at least some of the time.

The definition of "public receptor" itself specifies the types of areas where members of the public may routinely gather at least some of the time: residences, institutions such as hospitals and schools, buildings in general, parks and recreational areas. There should be little difficulty in identifying residences, institutions and businesses as such, and virtually any residence, institution and business will qualify as a public receptor, even when the property is used only seasonally (as in a vacation home). Notably, a residence includes its yard, if any, and an institution or business includes its grounds to the extent that employees or other members of the public are likely to routinely gather there at least some of the time for business or other purposes (see discussion of recreational areas below). The only circumstances that would justify not considering such a property a public receptor would be where your facility owns

or controls the property and restricts access to it, or no member of the public inhabits or occupies it at any time. Where a hospital, school, or other entity that provides public shelter is itself subject to the part 68 rule, it will be its own public receptor except for those areas where members of the public are not allowed to go at any time.

Buildings other than residences, institutions or businesses are also highly likely to qualify as public receptors since the function of most buildings is at least in part to shelter people. Accordingly, toll booth plazas, transit stations, and airport terminals would qualify as public receptors. For a building not to qualify as a public receptor, one of the circumstances mentioned above would have to apply.

Every designated park or recreational area, or at least some portion thereof, is apt to be a public gathering place by virtue of facilities made available to the public (e.g., visitors' center, playground, golf course, camping or picnic area, marina or ball field) or attributes that members of the public routinely seek to use (e.g., beach). It does not matter whether use of such facilities is seasonal; routine use for at least part of the year would qualify the area as a public receptor.

At the same time, some portion of a designated park or recreational area may not be a public receptor. For instance, a large state or national park may include relatively inaccessible tracts of land that do not contain public facilities or receive routine use. Occasional hiking, camping or hunting in such areas would not qualify the areas as public receptors.

An area need not be designated a recreational area to be one in fact. If an area is routinely used for recreational purposes, even if only seasonally, it is a recreational area for purposes of the part 68 rule. For example, a marina may not bill itself as a "recreational area," but if a marina houses recreational boats, it qualifies as a public receptor. Further, if your facility or a neighboring property owner allows the public to make routine recreational use of some portion of land (e.g., a ball field or fishing pond), that portion of land would qualify as a public receptor.

Roads and parking lots are not included as such in the definition of "public receptor." Neither are places where people typically gather; instead they are used to travel from one place to another or to park a vehicle while attending an activity elsewhere. However, if a parking lot is predictably and routinely used as a place of business (e.g., a farmer's market) or for a recreational purpose (e.g., a county fair), it would qualify as a public receptor.

In general, farm land would not be considered a public receptor. However, if farm land, or a portion thereof, is predictably and routinely occupied by farm workers or other members of public, even if only on a seasonal basis, that portion of the land would be a public receptor.

If you are in doubt about whether to consider certain areas around your facility as public receptors, you should consult with the relevant local officials and land owners and your implementing agency for guidance.

WHAT IS A DISTANCE TO AN ENDPOINT FROM A WORST-CASE RELEASE?

In broad terms, the distance to an endpoint is the distance a toxic vapor cloud, fire, or explosion from an accidental release will travel before dissipating to the point that serious injuries from short-term exposures will no longer occur. The rule establishes "endpoints" for each regulated substance and defines the circumstances of a

QS & AS PUBLIC RECEPTORS

Q. My processes are fenced, but my offices and parking lot for customers are not restricted. What is considered offsite? What is considered a public receptor?

A. The unrestricted areas would be considered offsite. However, they would not be public receptors because you are responsible for the safety of those who work in or visit your offices and because parking lots are not generally public receptors.

Q. What is considered a recreational area?

A. Recreational areas would include land that is designed, constructed, designated, or used for recreational activities. Examples are national, state, county, or city parks, other outdoor recreational areas such as golf courses or swimming pools and bodies of waters (oceans, lakes, rivers, and streams) when used by the public for fishing, swimming, or boating. Public and private areas that are predictably used for hunting, fishing, bird watching, bike riding, hiking, or camping or other recreational use also would be considered recreational areas. EPA encourages you to consult with land owners, local officials, and the community to reach an agreement on an area's status; your local emergency planning committee (LEPC) can help you with these consultations. EPA recognizes that some judgment is involved in determining whether an area should be considered a recreational area.

Q. Does public receptor cover only buildings on a property or the entire property? If the owner of the land next to my site restricts access to the land, is it still a public receptor?

A. Public receptors are not limited to buildings. For example, if there are houses near your property, both the houses and their yards are considered public receptors because it is likely that residents will be present in one or the other at least some of the time, and, in fact, people are likely to be in more danger if they are outside when a release occurred. The ability of others to restrict access to an area does not change its status as a public receptor. You need to consider whether that land is generally unoccupied. If the land is undeveloped or rarely has anyone on it, it is not a public receptor. If you are not sure of the land's use or occupancy, you should talk with the landowner and the community about its status. Because it is the landowner and members of the local community who are likely to be affected by your decision, you should involve them in the decision if you have doubts.

worst-case release scenario (e.g., scenario, weather, release rate and duration) (see Chapter 4 or the *RMP Offsite Consequence Analysis Guidance* for more information). You will have to define a worst-case release (usually the loss of the

total contents of your largest vessel) for each Program 1 process and either use EPA's guidance or conduct modeling on your own to determine the distance to the endpoint for that worst-case release. Beyond that endpoint, the effects on people are not considered to be severe enough to merit the need for additional action under this rule.

To define the area of potential impact from the worst-case release, draw a circle on a map, using the process as the center and the distance to the endpoint as the radius. If there are public receptors within that area, your process is not eligible for Program 1.

Q and A Determining Distances

Q. Our distance to the endpoint for the worst-case release is 0.3 miles. The nearest public receptor is 0.32 miles away. What tools are available to document that the public receptor is beyond the distance to the endpoint so we can qualify for Program 1?

A. The results of any air dispersion model (from EPA's guidance documents or other models) are not precise predictions. They represent an estimate, but the actual distances to the endpoint could be closer to or farther from the point of release. If your distance to the endpoint and distance to a public receptor are so close that you cannot document, using a USGS map, that the two points are different, it would be advisable to comply with the higher Program level. (The most detailed maps available from the US Geological Survey (scale of 1:24,000) are not accurate enough to map the distances you cite and document that the two points (which are about 100 feet apart) differ. GPS systems now have a margin of error of 22 meters (about 0.014 miles or 72 feet); if you are using a GPS system, you may be able to document that these points are different.)

ACCIDENT HISTORY

To be eligible for Program 1, no release of the regulated substance from the process can have resulted in one or more offsite deaths, injuries, or response or restoration activities at an environmental receptor during the five years prior to submission of your RMP. A release of the regulated substance from another process has no bearing on whether the first process is eligible for Program 1.

WHAT IS AN INJURY?

An injury is defined as "any effect on a human that results either from direct exposure to toxic concentrations; radiant heat; or overpressures from accidental releases or from the direct consequences of a vapor cloud explosion (such as flying glass, debris, and other projectiles) from an accidental release." The effect must "require medical treatment or hospitalization." This definition is taken from the OSHA regulations for keeping employee injury and illness logs and should be familiar to most employers. Medical treatment is further defined as "treatment, other than first aid, administered by a physician or registered professional personnel

under standing orders from a physician.” The definition of medical treatment will likely capture most instances of hospitalization. However, if someone goes to the hospital following direct exposure to a release and is kept overnight for observation (even if no specific injury or illness is found), that would qualify as hospitalization and so would be considered an injury.

WHAT IS AN ENVIRONMENTAL RECEPTOR?

The environmental receptors you need to consider are limited to natural areas such as national or state parks, forests, or monuments; officially designated wildlife sanctuaries, preserves, refuges, or areas; and Federal wilderness areas. All of these areas can be identified on local U.S. Geological Survey maps.

WHAT ARE RESTORATION AND RESPONSE ACTIVITIES?

The type of restoration and response activity conducted to address the impact of an accidental release will depend on the type of release (volatilized spill, vapor cloud, fire, or explosion), but may include such activities as:

- g** Collection and disposal of dead animals and contaminated plant life;
- g** Collection, treatment, and disposal of soil;
- g** Shutoff of drinking water;
- g** Replacement of damaged vegetation; or
- g** Isolation of a natural area due to contamination associated with an accidental release.

**Q & A
ENVIRONMENTAL RECEPTORS**

Q. Do environmental receptors include areas that are not Federal Class I areas under the CAA?

A. Yes. The list of environmental receptors in Part 68 includes areas in addition to those that qualify as Federal Class I areas under CAA section 162. Under Part 68, national parks, monuments, wilderness areas, and forests are environmental receptors regardless of size. State parks, monuments, and forests are also environmental receptors.

DOCUMENTING PROGRAM 1 ELIGIBILITY

For every Program 1 process at your facility, you must keep records documenting the eligibility of the process for Program 1. For each Program 1 process, your records should include the following:

- g** A description of the worst-case release scenario, which must specify the vessel or pipeline and substance selected as worst case, assumptions and parameters used, and the rationale for selection. Assumptions may include use of any administrative controls and any passive mitigation that were assumed to limit the quantity that could be released;
- g** Documentation of the estimated quantity of the worst-case release, release rate, and duration of release;
- g** The methodology used to determine distance to endpoints;
- g** Data used to determine that no public receptor would be affected; and
- g** Information on your coordination with public responders.

Qs & As ACCIDENT HISTORY

Q. What is the relationship between the accident history criteria for Program 1 and the five-year accident history? If my process is eligible for Program 1, do I still need to do a five-year accident history?

A. The five-year accident history is an information collection requirement that is designed to provide data on all serious accidents from a covered process involving a regulated substance held above the threshold quantity.

In contrast, the Program 1 accident history criteria focus on whether the process in question has the potential to experience a release of the regulated substance that results in harm to the public based on past events. Onsite effects, shelterings-in-place, and evacuations that have occurred must be reported in the five-year accident history, but they are not considered in determining Program 1 eligibility. Therefore, it is possible for process to be eligible for Program 1 and still have experienced a release that must be reported in the accident history for the source.

Q. A process with more than a threshold quantity of a regulated substance had an accident with offsite consequences three years ago. After the accident, we altered the process to reduce the quantity stored on site. Now the worst-case release scenario indicates that there are no public receptors within the distance to an endpoint. Can this process qualify for Program 1?

A. No, the process cannot qualify for Program 1 until five years have passed since any accident with consequences that disqualify a process for Program 1.

Q. A process involving a regulated substance had an accidental release with offsite consequences two years ago. The process has been shut down. Do I have to report anyway?

A. No. The release does not have to be included in your accident history. Your risk management plan only needs to address operating processes that have more than a threshold quantity of a regulated substance.

2.3 QUICK RULES FOR DETERMINING PROGRAM 1 ELIGIBILITY

You generally will not be able to predict with certainty that the worst-case scenario for a particular process will meet the criteria for Program 1. Processes containing refrigerated ammonia, however, may be more likely than others to be eligible for Program 1. The information presented below may be useful in identifying processes that may be eligible for Program 1.

TOXIC GASES

If you have a process containing more than a threshold quantity of ammonia that is not liquefied by refrigeration alone (i.e., you hold it as a gas or liquefied under pressure), the distance to the endpoint estimated for a worst-case release of the toxic gas will generally be several miles. As a result, the distance to endpoint is unlikely to be less than the distance to public receptors, unless the process is very remote. In some cases, however, ammonia in processes in enclosed areas may be eligible for Program 1.

REFRIGERATED AMMONIA

If you have a process containing anhydrous ammonia liquefied by refrigeration alone, and your worst-case release would take place into a diked area, the chances are good that the process will be eligible for Program 1, unless there are public receptors very close to the process. Even if you have many times the threshold quantity of ammonia, the process may still be eligible for Program 1.

2.4 PROGRAM 3

Most ammonia refrigeration processes that are not eligible for Program 1 will be subject to Program 3 requirements because they are subject to the OSHA PSM Standard. If your ammonia refrigeration process is subject to Program 2 requirements, consult the *General Guidance for Risk Management Programs*.

WHAT ARE THE ELIGIBILITY CRITERIA FOR PROGRAM 3?

Your process is subject to Program 3 if:

- g** Your process does not meet the eligibility requirements for Program 1, and
- g** Your process is subject to OSHA PSM (federal or state).

WHAT IS THE OSHA PSM STANDARD?

The OSHA Process Safety Management standard (codified at 29 CFR 1910.119) is a set of procedures in thirteen management areas designed to protect worker health and safety in case of accidental releases. Similar to EPA's rule, OSHA PSM applies to a range of facilities that have more than a threshold quantity of a listed substance in a process. All processes subject to this rule and the OSHA PSM standard (federal or

state) and not eligible for Program 1 are assigned to Program 3 because the Program 3 prevention program is virtually identical to the elements of the PSM standard. If you are already complying with OSHA PSM for a process, you probably will need to take few, if any, additional steps and develop little, if any, additional documentation to meet the requirements of the Program 3 prevention elements (see Chapter 6 for a discussion of differences between Program 3 prevention and OSHA PSM). EPA placed all covered OSHA PSM processes in Program 3 to eliminate the possibility of imposing overlapping, inconsistent requirements on the same process.

2.5 PROGRAM 2

Program 2 is considered a default program level because any covered process that is not eligible for Program 1 or assigned to Program 3 is, by default, subject to Program 2 requirements. Ammonia refrigeration processes will usually not be eligible for this program level because they are covered by OSHA PSM. If your ammonia process is not eligible for Program 1, it will generally be subject to Program 3.

Exhibit 2-2 provides a summary of the criteria for determining Program level.

2.6 DEALING WITH PROGRAM LEVELS

WHAT IF I HAVE MULTIPLE PROGRAM LEVELS?

If you have more than one covered process, you may be dealing with multiple program levels in your risk management program.

If your facility has processes subject to different program levels, you will need to comply with different program requirements for different processes. Nevertheless, you must submit a single RMP for all covered processes.

If you prefer, you may choose to adopt the most stringent applicable program level requirements for all covered processes. For example, if you have three covered processes, one eligible for Program 1 and two subject to Program 3, you may find it administratively easier to follow the Program 3 requirements for all three covered processes. Remember, though, that this is only an option; we expect that most sources will comply with the set of program level requirements for which each process is eligible.

Q & A OSHA

Q. If my state administers an OSHA-approved PSM program, does that mean that my processes that are subject to OSHA PSM under the state rules are in Program 3?

A. Yes, as long as the process does not qualify for Program 1. Any process subject OSHA PSM, under federal or state rules, is considered to be in Program 3 unless it qualifies for Program 1.

EXHIBIT 2-2 PROGRAM LEVEL CRITERIA		
Program 1	Program 2	Program 3
No accidents in the previous five years that resulted in any offsite: Death Injury Response or restoration activities at an environmental receptor	The process is not eligible for Program 1 or subject to Program 3.	Process is not eligible for Program 1.
AND		AND
No public receptors in worst-case circle.		Process is subject to OSHA PSM.
AND		OR
Emergency response coordinated with local responders.		Process is classified in NAICS code: 32211 Pulp mills 32411 Petroleum refineries 32511 Petrochemical manufacturers* 325181 Alkalies and chlorine 325188 Industrial inorganic chemicals (not elsewhere classified)* 325192 Other cyclic crudes and intermediates* 325199 Industrial organic chemicals (not elsewhere classified)* 325211 Plastics materials and resins 325311 Nitrogenous fertilizers 32532 Agricultural chemicals (not elsewhere classified)

CAN THE PROGRAM LEVEL FOR A PROCESS CHANGE?

A change in a covered process or in the surrounding community can result in a change in the Program level of the process. If this occurs, you must submit an updated RMP within six months of the change that altered the program level for the covered process. If the process no longer qualifies as a covered process (e.g., as a result of a change in the quantity of the regulated substance in the process), then you

will need to "deregister" the process (see Chapter 8 for more information). Typical examples of switching program levels include:

MOVING UP

From Program 1 to Program 3. You have a covered process subject to Program 1 requirements. A new residential development results in public receptors being located within the distance to the endpoint for a worst-case release for that process. The process is, thus, no longer eligible for Program 1. You must submit a revised RMP within six months of the program level change, indicating and documenting that your process is now in compliance with the new program level requirements.

From Not Covered to Program 1 or 3. You have a process that was not originally covered by part 68, but, due to an expansion in production, the process holds more than 10,000 pounds of anhydrous ammonia. You must determine which Program level applies and come into compliance with the rule by June 21, 1999, or by the time you exceed the threshold quantity, whichever is later.

SWITCHING DOWN

From Program 3 to Program 1. At the time you submit your RMP, you have a covered process subject to Program 3 requirements because it experienced an accidental release of a regulated substance with offsite impacts four years ago. Subsequent process changes have made such an event unlikely (as demonstrated by the worst-case release analysis). One year after you submit your RMP, the accident will no longer be included in the five-year accident report for the process, so the process is eligible for Program 1. If you elect to qualify the process for Program 1, you must submit a revised RMP within six months of the program level change, indicating and documenting that the process is now in compliance with the new program level requirements.

From Program 3 to Not Covered. You have a covered process that has been subject to Program 3 requirements, but due to a reduction in production, the amount of ammonia it holds no longer exceeds the threshold. Therefore, the process is no longer a covered process. You must submit a revised RMP within six months indicating that your process is no longer subject to any program level requirements.

2.7 SUMMARY OF PROGRAM REQUIREMENTS

Regardless of the program levels of your processes, you must complete a five-year accident history for each process (see Chapter 3) and submit an RMP that covers all processes (see Chapter 8). Depending on the Program level of each of your processes, you must comply with the additional requirements described below.

PROGRAM 1

For each Program 1 process, you must conduct and document a worst-case release analysis. You must coordinate your emergency response activities with local responders and sign the Program 1 certification as part of your RMP submission.

PROGRAMS 2 AND 3

For all Program 3 processes, you must conduct and document at least one worst-case release analysis to cover ammonia. You may need to conduct additional worst-case release analyses if worst-case releases from different parts of your facility would affect different public receptors. You must also conduct one alternative release scenario analysis for ammonia. See Chapter 4 or the *RMP Offsite Consequence Analysis Guidance* for specific requirements. You must coordinate your emergency response activities with local responders and, if you use your own employees to respond to releases, you must develop and implement an emergency response program. See Chapter 7 for more details. (Because ammonia is listed as a toxic substance, you do not need to consider its flammability in doing offsite consequence analyses. If your facility could confine ammonia and create an ignitable cloud, explosion hazards should be addressed in your process hazard analysis.)

For each Program 3 process, you must implement all of the elements of the Program 3 prevention program: process safety information, process hazard analysis, standard operating procedures, training, mechanical integrity, compliance audits, incident investigations, management of change, pre-startup reviews, contractors, employee participation, and hot work permits. See Chapter 6 for more details.

Exhibit 2-3 diagrams the requirements in general and Exhibit 2-4 lists them in more detail.

EXHIBIT 2-3

DEVELOP RISK MANAGEMENT PROGRAM AND RMP

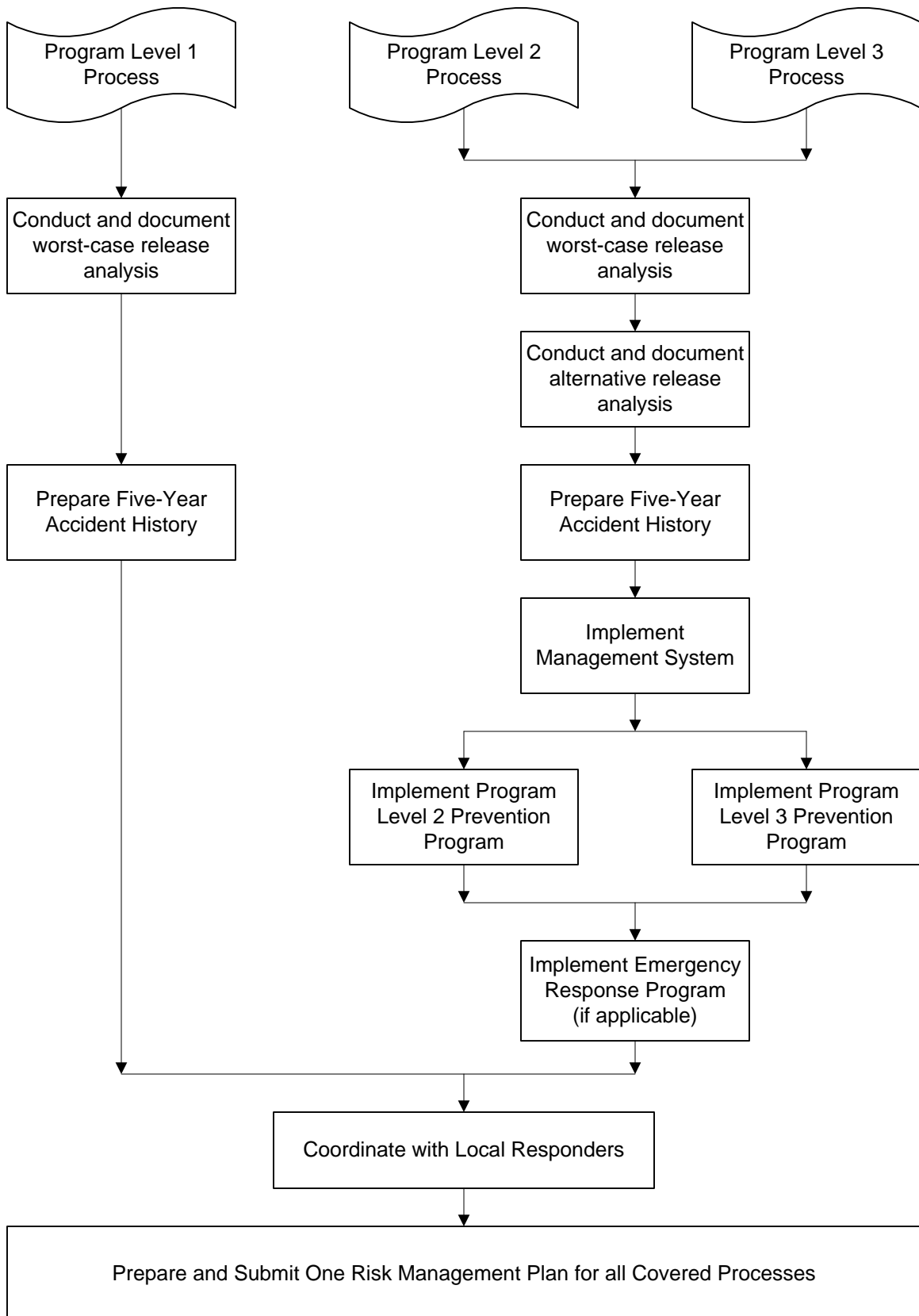


EXHIBIT 2-4 COMPARISON OF PROGRAM REQUIREMENTS	
Program 1	Program 3
Worst-case release analysis	Worst-case release analysis
	Alternative release analysis
5-year accident history	5-year accident history
	Document management system
Prevention Program	
Certify no additional prevention steps needed	Process Safety Information
	Process Hazard Analysis.
	Operating Procedures
	Training
	Mechanical Integrity
	Incident Investigation
	Compliance Audit
	Management of Change
	Pre-Startup Review
	Contractors
	Employee Participation
	Hot Work Permits
Emergency Response Program	
Coordinate with local responders	Develop plan and program and coordinate with local responders
Submit One Risk Management Plan for All Covered Processes	